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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/599,812	06/21/2000	Michael C. Murray	MSI-586US	7148

22801 7590 02/27/2003

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EXAMINER

NAHAR, QAMRUN

ART UNIT PAPER NUMBER

2124

DATE MAILED: 02/27/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/599,812

Applicant(s)

MURRAY ET AL.

Examiner

Qamrun Nahar

Art Unit

2124

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 21 June 2000.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-42 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-42 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 21 June 2000 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

1. Claims 1-42 have been examined.

Specification

2. The disclosure is objected to because of the following informalities: Related Application Serial Numbers are missing on page 1 of the specification.

Appropriate correction is required.

Claim Objections

3. Claim 23 is objected to because of the following informalities: "a extension" on page 55, line 8 should be "an extension". Appropriate correction is required.

4. Claims 30 and 31 are objected to because of the following informalities: "exploding various nodes" on page 56, lines 12 and 15, respectively, should be "exposing various nodes".

Appropriate correction is required.

5. Claim 37 is objected to because of the following informalities: "expodes a node" on page 57, line 15 should be "exposes a node". Appropriate correction is required.

Claim Rejections - 35 USC § 101

6. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

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7. Claims 1-7, 9-10, 12-16, 18-24 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

As per claims 1, 9, 12, and 18, merely claimed as a program representing a computer listing *per se* (software architecture), that is, descriptions or expressions of such a program and that is, descriptive material *per se*, non-functional descriptive material, and is not statutory because it is not a physical “thing” nor a statutory process, as there are not “acts” being performed. Such claimed programs do not define any structural and functional interrelationships between the program and other claimed aspects of the invention which permit the program’s functionality to be realized. Since a computer program is merely a set of instructions capable of being executed by a computer, the program itself is not a process, without the computer-readable medium needed to realize the program’s functionality. In contrast, a claimed computer-readable medium encoded with a program defines structural and functional interrelationships between the program and the medium which permit the program’s functionality to be realized, and is thus statutory. **Warmerdam**, 33 F.3d at 1361, 31 USPQ2d at 1760. **In re Sarkar**, 588 F.2d 1330, 1333, 200 USPQ 132, 137 (CCPA 1978). See MPEP § 2106(IV)(B)(1)(a).

It is suggested that claims 1, 9, 12, and 18 be amended to recite the claimed software architecture on a computer system.

As per claims 2-7, 10, 13-16, and 19-24, these claims are rejected for dependency on the above rejected non-statutory claims 1, 9, 12, and 18.

Claim Rejections - 35 USC § 102

8. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

9. Claims 1, 8-9, 11, 18, 25, 40, and 42 are rejected under 35 U.S.C. 102(b) as being anticipated by Smale (U.S. 5,764,985).

Per Claim 1:

The Smale patent discloses:

- **a software architecture comprising multiple attachment points collectively arranged to filter data associated with files that describe software extensions** (“a method and system that coordinates software extensions ... One or more extensions register with the central manager, the extensions being capable of providing extended functionality to one or more lower level functions ... As calls are made from an application program to a lower level function” in abstract; column 2, lines 39-42; and column 3, lines 1-10)
- **multiple extension managers associated with the multiple attachment points and with respective feature types that can be added to a software platform by software extensions, the extension managers being configured to receive data from the multiple attachment points that pertains only to the feature type with which the extension manager is associated**

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("One or more extensions register with the central manager, the extensions being capable of providing extended functionality to one or more lower level functions ... As calls are made from an application program to a lower level function, the calls are intercepted at the central manager. Each of the appropriately registered extensions is then notified of the existence of the call, thereby allowing the extensions to provide extended functionality thereto ... the call is passed by the manager to the low level function, which returns a result of the call to the manager. The extensions are then notified of the result of the call. This enables the registered extensions to modify the result of the call, for example to retry the call." in abstract and column 3, lines 1-15).

Per Claim 8:

The Smale patent discloses:

- **a computer embodying the software architecture of claim 1** (column 3, lines 20-23 and Fig. 1).

Per Claim 9:

The Smale patent discloses:

- **a software architecture comprising a hub structure configured to receive multiple different files that describe software extensions that can be added to a software platform** ("a method and system that coordinates software extensions ... One or more extensions register with the central manager, the extensions being capable of providing extended functionality to

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one or more lower level functions ... As calls are made from an application program to a lower level function, the calls are intercepted at the central manager. Each of the appropriately registered extensions is then notified of the existence of the call, thereby allowing the extensions to provide extended functionality thereto ... the call is passed by the manager to the low level function, which returns a result of the call to the manager. The extensions are then notified of the result of the call. This enables the registered extensions to modify the result of the call, for example to retry the call.” in abstract; column 2, lines 39-42; column 3, lines 1-15; and Fig. 3)

- combine the multiple different files into a single exposable list; and expose the single exposable list to a filter structure that is configured to filter the list (“the data structure 52 contains information relating to all extensions of the type registered for notification when requests to add connections are received ... a field 58 contains a pointer identifying the location of an array 60 (or a list or table) wherein the addresses of the extensions registered for this type of request are located. As shown in FIGS. 4 and 5, other types of registered extensions have similar data structures 53, 54, within the master entry list 50. As with data structure 52, each structure 53, 54 is indexed by its type, contains a counter for the registered extension entries for that type, and includes a field containing a pointer to its corresponding address array, 61, 62, respectively.” in column 3, lines 38-40; column 7, lines 24-43; and Figs. 4 and 5).

Per Claim 11:

The Smale patent discloses:

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- **a computer embodying the software architecture of claim 9** (column 3, lines 20-23 and Fig. 1).

Per Claim 18:

This is another version of the claimed software architecture discussed above, claim 9, wherein all claim limitations also have been addressed and/or covered in cited areas as set forth above. Thus, accordingly, this claim is also anticipated by Smale.

Per Claim 25:

The Smale patent discloses:

- **a computer embodying the software architecture of claim 18** (column 3, lines 20-23 and Fig. 1).

Per Claim 40:

This is a method version of the claimed software architecture discussed above, claim 18, wherein all claim limitations also have been addressed and/or covered in cited areas as set forth above. Thus, accordingly, this claim is also anticipated by Smale.

Per Claim 42:

The Smale patent discloses:

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- one or more computer-readable media having computer-readable instructions thereon which, when executed by a computer, cause the computer to implement the method of claim 40 (column 3, lines 20-23 and Fig. 1).

Claim Rejections - 35 USC § 103

10. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

11. Claims 2-7, 10, 12-17, 19-24, 26-39, and 41 are rejected under 35 U.S.C. 103(a) as being unpatentable over Smale (U.S. 5,764,985) in view of Cheng (U.S. 6,421,656).

Per Claim 2:

The rejection of claim 1 is incorporated, and further, Smale does not explicitly teach that the attachment points are defined as predicate chains. Cheng teaches that the attachment points are defined as predicate chains (column 3, lines 48-51).

It would have been obvious to one having ordinary skill in the computer art at the time of the invention was made to modify the software architecture disclosed by Smale to include that the attachment points are defined as predicate chains using the teaching of Cheng. The modification would be obvious because one of ordinary skill in the art would be motivated to provide proper order of execution of the extended functionality.

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Per Claim 3:

The rejection of claim 1 is incorporated, and further, Smale does not explicitly teach that the attachment points filter XML data. Cheng teaches that the attachment points filter XML data (column 3, lines 48-51).

It would have been obvious to one having ordinary skill in the computer art at the time of the invention was made to modify the software architecture disclosed by Smale to include that the attachment points filter XML data using the teaching of Cheng. The modification would be obvious because one of ordinary skill in the art would be motivated to provide extensions using an extensible programming language.

Per Claim 4:

The rejection of claim 3 is incorporated, and Cheng further teaches that each feature type is associated with an XML tag (column 15, lines 31-51).

Per Claim 5:

The rejection of claim 3 is incorporated, and Cheng further teaches that each feature type is associated with an XML tag, at least some of the feature types comprising user-defined feature types (column 2, lines 2-5 and column 15, lines 31-51).

Per Claim 6:

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The rejection of claim 1 is incorporated, and further, Smale does not explicitly teach that each attachment point exposes collections of ordered nodes. Cheng teaches that each attachment point exposes collections of ordered nodes (column 15, lines 31-56).

It would have been obvious to one having ordinary skill in the computer art at the time of the invention was made to modify the software architecture disclosed by Smale to include that each attachment point exposes collections of ordered nodes using the teaching of Cheng. The modification would be obvious because one of ordinary skill in the art would be motivated to provide extensions to World Wide Web documents.

Per Claim 7:

The rejection of claim 1 is incorporated, and further, Smale does not explicitly teach that each attachment point exposes collections of ordered XML nodes. Cheng teaches that each attachment point exposes collections of ordered XML nodes (column 15, lines 31-56).

It would have been obvious to one having ordinary skill in the computer art at the time of the invention was made to modify the software architecture disclosed by Smale to include that each attachment point exposes collections of ordered XML nodes using the teaching of Cheng. The modification would be obvious because one of ordinary skill in the art would be motivated to provide extensions to World Wide Web documents.

Per Claim 10:

The rejection of claim 9 is incorporated, and Smale further teaches that the hub structure receives multiple different files and exposes a list (column 3, lines 1-15 and lines 38-40; column

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7, lines 24-43; and Figs. 3, 4, and 5). Smale does not explicitly teach XML files or exposing a list of XML nodes. Cheng teaches XML files and exposing a list of XML nodes (column 15, lines 31-56).

It would have been obvious to one having ordinary skill in the computer art at the time of the invention was made to modify the software architecture disclosed by Smale to include XML files and expose a list of XML nodes using the teaching of Cheng. The modification would be obvious because one of ordinary skill in the art would be motivated to provide extensions using an extensible programming language and to provide extensions to World Wide Web documents.

Per Claim 12:

Smale teaches a software architecture comprising multiple different attachment points each of which is configured to receive data that pertains to one or more software extensions that can be added to a software platform (“a method and system that coordinates software extensions ... One or more extensions register with the central manager, the extensions being capable of providing extended functionality to one or more lower level functions ... As calls are made from an application program to a lower level function, the calls are intercepted at the central manager. Each of the appropriately registered extensions is then notified of the existence of the call, thereby allowing the extensions to provide extended functionality thereto ... the call is passed by the manager to the low level function, which returns a result of the call to the manager. The extensions are then notified of the result of the call. This enables the registered extensions to modify the result of the call, for example to retry the call.” in abstract; column 2, lines 39-42; column 3, lines 1-15; and Fig. 3), process the data to provide a list, and expose the list (“the data

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structure 52 contains information relating to all extensions of the type registered for notification when requests to add connections are received ... a field 58 contains a pointer identifying the location of an array 60 (or a list or table) wherein the addresses of the extensions registered for this type of request are located. As shown in FIGS. 4 and 5, other types of registered extensions have similar data structures 53, 54, within the master entry list 50. As with data structure 52, each structure 53, 54 is indexed by its type, contains a counter for the registered extension entries for that type, and includes a field containing a pointer to its corresponding address array, 61, 62, respectively.” in column 3, lines 38-40; column 7, lines 24-43; and Figs. 4 and 5). Smale does not explicitly teach XML data, providing a list of XML nodes, or exposing the list of XML nodes. Cheng teaches XML data, providing a list of XML nodes, and exposing the list of XML nodes (“The XML document presented above has its document structure tree illustrated in Fig. 8 ... the nodes have been shown in Fig. 8.” in column 15, lines 31-56).

It would have been obvious to one having ordinary skill in the computer art at the time of the invention was made to modify the software architecture disclosed by Smale to include XML data, provide a list of XML nodes, and expose the list of XML nodes using the teaching of Cheng. The modification would be obvious because one of ordinary skill in the art would be motivated to provide extensions using an extensible programming language and to provide extensions to World Wide Web documents.

Per Claims 13-16:

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These are another versions of the claimed software architecture discussed above (claims 9 and 10), wherein all claim limitations also have been addressed and/or covered in cited areas as set forth above. Thus, accordingly, these claims are also obvious.

Per Claim 17:

The rejection of claim 12 is incorporated, and Smale further teaches a computer embodying the software architecture of claim 12 (column 3, lines 20-23 and Fig. 1).

Per Claim 19:

This is an another version of the claimed software architecture discussed above, claim 10, wherein all claim limitations also have been addressed and/or covered in cited areas as set forth above. Thus, accordingly, this claim is also obvious.

Per Claim 20:

The rejection of claim 19 is incorporated, and Cheng further teaches that the list contains root node tags for all of the XML files (column 15, lines 31-56).

Per Claim 21:

The rejection of claim 19 is incorporated, and Smale further teaches that the files logically describe where a particular extension fits on the software platform (column 3, lines 38-40; column 7, lines 24-43; and Figs. 4 and 5). Smale does not explicitly teach XML files. Cheng teaches XML files (column 15, lines 31-56).

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It would have been obvious to one having ordinary skill in the computer art at the time of the invention was made to modify the software architecture disclosed by Smale to include XML files using the teaching of Cheng. The modification would be obvious because one of ordinary skill in the art would be motivated to provide extensions using an extensible programming language.

Per Claim 22:

The rejection of claim 19 is incorporated, and further, Smale does not explicitly teach that the attachment points are defined as predicate chains. Cheng teaches that the attachment points are defined as predicate chains (column 3, lines 48-51).

It would have been obvious to one having ordinary skill in the computer art at the time of the invention was made to modify the software architecture disclosed by Smale to include that the attachment points are defined as predicate chains using the teaching of Cheng. The modification would be obvious because one of ordinary skill in the art would be motivated to provide proper order of execution of the extended functionality.

Per Claim 23:

The rejection of claim 19 is incorporated, and Smale further teaches an extension manager is notified whenever an extension comprising a feature type with which it is associated is added or removed from the software platform (column 3, lines 1-15).

Per Claim 24:

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The rejection of claim 19 is incorporated, and Cheng further teaches that each feature type is associated with a particular XML tag (column 15, lines 31-51).

Per Claim 26:

This is a method version of the claimed software architecture discussed above, claim 12, wherein all claim limitations also have been addressed and/or covered in cited areas as set forth above. Thus, accordingly, this claim is also obvious.

Per Claim 27:

The rejection of claim 26 is incorporated, and further, Smale does not explicitly teach that the multiple attachment points are defined as predicate chains. Cheng teaches that the multiple attachment points are defined as predicate chains (column 3, lines 48-51).

It would have been obvious to one having ordinary skill in the computer art at the time of the invention was made to modify the method disclosed by Smale to include that the multiple attachment points are defined as predicate chains using the teaching of Cheng. The modification would be obvious because one of ordinary skill in the art would be motivated to provide proper order of execution of the extended functionality.

Per Claim 28:

The rejection of claim 27 is incorporated, and Cheng further teaches that the individual attachment points receive XML data as an input and expose a list of XML nodes (column 15, lines 31-56).

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Per Claim 29:

The rejection of claim 26 is incorporated, and Cheng further teaches that the processing is accomplished by filtering on specific nodes (column 15, lines 31-56).

Per Claim 30:

The rejection of claim 26 is incorporated, and Cheng further teaches that the processing is accomplished by exposing various nodes (column 15, lines 31-56).

Per Claim 31:

The rejection of claim 26 is incorporated, and Cheng further teaches that the processing is accomplished by filtering on specific nodes and exposing various nodes (column 15, lines 31-56).

Per Claim 32:

The rejection of claim 26 is incorporated, and Smale further teaches one or more computer-readable media having computer-readable instructions thereon which, when executed by a computer, cause the computer to implement the method of claim 26 (column 3, lines 20-23 and Fig. 1).

Per Claims 33-35:

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These are method versions of the claimed software architecture discussed above (claims 18 and 19), wherein all claim limitations also have been addressed and/or covered in cited areas as set forth above. Thus, accordingly, these claims are also obvious.

Per Claim 36:

This is a method version of the claimed software architecture discussed above, claim 22, wherein all claim limitations also have been addressed and/or covered in cited areas as set forth above. Thus, accordingly, this claim is also obvious.

Per Claim 37:

This is a method version of the claimed software architecture discussed above, claim 19, wherein all claim limitations also have been addressed and/or covered in cited areas as set forth above. Thus, accordingly, this claim is also obvious.

Per Claim 38:

This is a method version of the claimed software architecture discussed above (claims 18 and 19), wherein all claim limitations also have been addressed and/or covered in cited areas as set forth above. Thus, accordingly, this claim is also obvious.

Per Claim 39:

The rejection of claim 33 is incorporated, and Smale further teaches one or more computer-readable media having computer-readable instructions thereon which, when executed

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by a computer, cause the computer to implement the method of claim 33 (column 3, lines 20-23 and Fig. 1).

Per Claim 41:

This is a method version of the claimed software architecture discussed above, claim 19, wherein all claim limitations also have been addressed and/or covered in cited areas as set forth above. Thus, accordingly, this claim is also obvious.

Conclusion

12. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

13. Any inquiry concerning this communication from the examiner should be directed to Qamrun Nahar whose telephone number is (703) 305-7699. The examiner can normally be reached on Mondays through Thursdays from 9:00 AM to 6:30 PM. The examiner can also be reached on alternate Fridays.

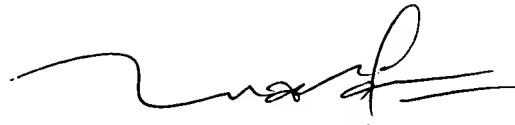
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kakali Chaki, can be reached on (703) 305-9662. The fax phone number for the organization where this application or processing is assigned is (703) 746-7239.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-3900.

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QN
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TUAN Q. DAM
PRIMARY EXAMINER